REMARKS

A restriction requirement is set forth in Paper No. 5. Applicants respectfully traverse in part and accept in part the restriction requirement.

The presently pending claims are not properly divisible into three categories of invention. The present restriction requirement divides the claims into Invention I (pitch estimation, claims 1-28), Invention II (voiced/unvoiced determination, claims 29-36, 52-54, and 67-76), and Invention III (speech synthesis, 37-51, 55-66, and 77-79).

Invention III includes claims 58-66 and 77-79, which relate to the **decoding** of data and the synthesis of speech. Applicants agree to withdraw claims 58-66 and 77-79 from further examination in view of the present restriction requirement. However, the inclusion of claims 37-51 and 55-57 in Invention III is respectfully traversed because those claims, like the claims in Invention I and Invention II, relate to the **encoding** of a signal (such as speech) into data.

Claim 37 relates to encoding because it recites a method to process a signal that is useful in making a voiced/unvoiced determination. An example of a method of using first and second techniques to synthesize an original spectrum of a signal and then calculating errors for each technique with respect to the signal spectrum for given bands to determine whether a band is voiced or unvoiced is given on pages 21-22 of the application. Aspects of this method are recited in claim 37, with additional aspects of the method recited in dependent claims. See, for example, claims 44 and 47 which claim the method of claim 37 in the context of making a voiced/unvoiced determination. Accordingly, claims 37-51 claim a method relating to encoding a signal, and are not properly included with Invention III claims. Furthermore, because the method of claim 37 may be used in making a voiced/unvoiced determination, as recited in certain claims depending from claim 37, this group of claims is more closely associated with Invention

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II claims. Claims 55-57 also relate to the encoding of a signal, and the subject matter of claim 57 overlaps with Invention II claims ("The method of claim 55 further comprising the steps of: determining a voicing parameter conveying voiced/unvoiced band information . . .).

Applicants respectfully traverse the restriction requirement with respect to Invention I claims, Invention II claims, and claims 37-51 and 55-57. Reconsideration is requested. These claims all relate to the encoding of signals into data.

For example, claim 67 recites an encoder comprising, inter alia, a means for determining a pitch value for frames marked voiced (roughly corresponding to the description of Invention I claims) **and** a means for basing an unvoiced/voiced decisions for bands of frames marked voiced on two error functions (roughly corresponding to the description for Invention II claims). Claim 70 depends from claim 67 and recites additional detail for the means for determining a pitch value (Invention I). Additional claims recite that the means for basing an unvoiced/voiced decision for bands of frames marked voiced on two error functions (Invention II) comprises a means for dividing frames marked voiced into bands **based on the pitch value** (Invention I). See claim 75, see also claim 72. In short, the inventions presently categorized as Inventions I and II are recited together in claims 67-76, and are not properly subject to restriction requirement. See MPEP §806.05(c)(B)(II)

Furthermore, the claims reciting unvoiced/voiced determination depend on accurate pitch estimation, as claimed in Invention I claims, for further processing of the same signal. See e.g., Application, pp. 19, 20, claim 34.

In summary, the classification of claims 37-51 and 55-57 as Invention III claims is respectfully traversed. Also, the classification of claims 67-76 as Invention II claims is respectfully traversed, as those claims recite aspects of both Invention I and II. Applicants

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respectfully submit that claims 1-57 and 67-76 should not be subject to restriction requirement as they are all related to an encoder function. Claims 58-66 and 77-79 are withdrawn as related to decoders, where the encoders and decoders of the present application are usable together, but are also separately usable. MPEP 806.05(d).

If, after reconsideration, the restriction requirement is made final, Applicants provisionally elect Invention I claims for further examination.

If the examiner finds that there are any outstanding issues which may be resolved by a telephone interview, the Examiner is invited to contact the undersigned at the below listed number.

Respectfully submitted,

WELSH & KATZ, LTD.
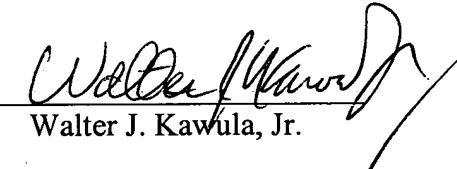
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